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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,601	08/10/2001	Jani Ekman	930.336USW1	8153

32294 7590 01/28/2004

SQUIRE, SANDERS & DEMPSEY L.L.P.  
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EXAMINER
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CHOW, CHARLES CHIANG

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/927,601

Applicant(s)

EKMAN ET AL.

Examiner

Charles Chow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**Office Action for  
Applicant's Amendment  
Received on 11/06/2003**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayers et al. (US 6,539,237 B1) in view of Thomas (US 6,421,339 B1), and further in view of Wallentin (US 6,233,222 B1).

Regarding **claim 1**, Sayers et al. ("Sayers") teaches a cellular communication network (col. 7, lines 17-26, a wireless GSM system has private and public network in Fig. 1-4 and Fig. 15). Sayers discloses a integrated wireless system comprises plurality of gateways (gateway 42-1 to 42-G, in Fig. 2, Fig. 4; and in col. 9, lines 42-45) for controlling cells in the cellular communications network, such as networks PSTN 26, ISDN 28, PBX 43, LAN (in Fig. 2, Fig. 4). Sayers teaches the wireless packet IP call connections for public GSM network and private networks (abstract). Besides, Sayers teaches the intra-private network handover, inter-private network handover, the handover between private and public network in col. 23, lines 6-15).

Sayers discloses the gateways being arranged to receive RF information from at least one

mobile station in the network. Because Sayers teaches the mobile station 4 in private network can communicate with public network 8, via gateways 42, through base transceiver station P-BTS 27-1/ 27-p, hub 23, router 33, (as shown in Fig. 2, and col. 10, lines 19-24). Sayers discloses a gateways 42 which provides the line interface and transcoding functions to PSTN, ISDN, PBX (Fig. 4, col. 11, lines 37-43), for mobile station.

Sayers teaches each gateway includes means for generating a handover required indication for a call (as shown in col. 27, lines 62-67, the means for forwarding a handover message from the packet network interface as a nonstandard packet network message indicating a handover request).

Sayers teaches the packet generating means for generating a packet addressed to said gatekeeper including control information comprising candidate identity and address of alternative cell for possible call transfer (as shown in col. 27, lines 50-61, the call control message from serving P-BTS to target P-BTS, having handover information indicating P-BTS identifier and called party number; the BTS ID for handover in col. 23, lines 43-50; and the P-BTS can perform handover candidate calculation in col. 23, lines 18-42). Sayers discloses the P-BTS performs the gatekeeper function in col. 16-18).

Sayers discloses the gatekeeper including means for generating a packet for sending handover request for handing over (as shown above, in col. 27, lines 50-67, the P-BTS-gatekeeper passing a handover request to packet data interface, and generating handover location request).

Sayers does not clearly teaches the gatekeeper connected to the gateway by a switch packet path.

Thomas teaches the above claimed features for connecting gatekeeper to gateway via a switched packet path. Because Thomas teaches gatekeeper 44 (Fig. 1), which is connected, via packet data network 30, R/GW 34/28 (Fig. 1, col. 3, lines 6-10), to gateways 24, 32, 26 for forwarding a call (title, abstract). Thomas teaches the home gatekeeper authorizes roaming user with address and transient identity for call connection to other visited network (abstract; col. 6, line 60 to col. 7, line 45). Thomas teaches at least one gatekeeper 14 or 44 (Fig. 1), for call forwarding (title, abstract, figure in cover page). Thomas provides a technique to allow home gatekeeper to authorize the transient identity and address, such that the remote call can be efficiently connected, without traveling to the remote site (col. 2, lines 22-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Sayers, and to include Thomas's home gatekeeper to authorize the transient identity and address, such that the remote call can be efficiently connected, without traveling to the remote site.

Sayers does not clearly indicate the transmitting of candidate list to gatekeeper for handover.

Wallentin teaches the radio network controller RNC 222<sub>2</sub>, 222<sub>1</sub> as the gatekeepers, and the candidate connection identity list for controlling the network congestion, by adjusting the call connection (title, abstract, Fig. 2, Fig. 5, Fig. 9-10; col. 1, lines 14-16, summary of invention). Wallentin teaches the RNC 222<sub>1</sub> prepares and transmits congestion message to

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RNC 222<sub>2</sub>, and the congestion message including the connection identity list (col. 10, line 63 to col. 11, line 6, Fig. 2, 5, 9-10). Wallentin provides a call congestion control such that the resources can be efficiently used by a node in another region, for the call connection adjustment, to avoid the congestion interference (col. 3, lines 44-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Sayers above, and to include Wallentin's efficiently usage of resources at another node for the call connection, such that system can avoid the call congestion.

Regarding **claim 2**, referring to Sayers' gatekeeper 41 which is the common control for gateways 42-1/42-G (as shown in Fig. 2, 4). Besides, Thomas teaches the gatekeepers 14 as the common control for gateways 22, 24, 32, 26 (Fig. 1).

Regarding the packet generated by said gatekeeper is addressed to one of said gateways in said zone, Sayers has shown above the gatekeeper (P-BTS 27) generates packet to public network 8, via gateway 42-1/42-G (as shown in col. 10, lines 19-24). Sayers also showed the packet interface layer for formatting an external control message which has alias identifier, intended for transmission across the packet network (in col. 25, col. 56-67).

Regarding **claim 3**, referring Sayers above, for an interface for connection to an external, public, network which includes an external controller (the external formed by gateway 42-1/42-G, P-BTS 27, hub 23, and router 33, as shown in Fig. 2), for the packet generated by gatekeeper is addressed to said controller (as shown above, in claim 2, col. 25, lines 56-67).

In Fig. 1, Sayer also considers the external controller BSC 16, for private networks .

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Regarding **claim 4**, referring to Thomas' Fig. 1, for the data defining network specific resources is held at each gateway, such as gateway 26 is defined for ISDN network, gateway 24 is defined for ATM network, and gateway 22 is defined for PSTN network.

2. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayers in view of Thomas, as applied to claim 1 above, and further in view of Hannula et al. (US 6,366,893 B2).

In the above it does not clearly indicate the data defining network specific resources defines a GSM specific end system information.

Regarding **claim 5**, Hannula et al. (also as Hannula in below) teaches the service gateway 10 has conversion 152 (Fig. 4) for interfacing to various payment protocols (abstract, figure in cover page, Fig. 1, Fig. 5-6), for the payment transactions. Hannula's system is for Pan European digital GSM system, as shown in col. 6, line 65 to col. 7, line 3). Hannula teaches the service gateway 10 is arranged to perform the protocol conversion between the first payment interface and at least one further payment protocol interface (col. 8, line 66 to col. 9, line 2; col. 9, lines 61-64). Hannula's gateway protocol conversion can immediately provide the protocol interface conversion to many different protocols, such that the system can interface to different protocols with low cost (col. 1, line 42 to col. 2, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Sayers above, and to include Hannula's gateway protocol conversion to many different protocols, such that the system can interface to different protocols with low cost.

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Regarding **claim 6**, referring to Thomas above for the plurality of gatekeepers each controlling a set of gateway (Fig. 1), for the defining individual network zone for PSTN, ISDN, ATM. Referring to Sayers above for the handover, and the generating of packet at gatekeeper (serving P-BTS) for addressing to at least one other gatekeeper (target P-BTS) .

Regarding **claim 7**, referring to Sayers above for the anchor gatekeeper through which all handoff request are routed (in col. 11, lines 4-18, the gatekeeper provides functions for accessing to network, translation of called numbers, routing calls).

3. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayers in view of Thomas, as applied to claim 1 above, and further in view of Hannula.

Regarding **claim 8**, referring to claims 1, 5, above for the method of effecting handoff of call for mobile station in cellular network. Referring to Sayers for the P-BTS formulating at source gateway of the packet control message which indicates the target P-BTS identifier (Sayer's claim 11), and the alias identifier in Sayers claim 1. Referring to Sayers above for the candidate calculation for determining of the target gateway for forwarding handoff request. Referring to Sayers' claim 1 for formulating, generating, external packet control message intended for transmission over the packet data network (Fig. 4, col. 11, lines 37-51; and Fig. 15, col.24, lines 25-53). Besides, Sayers discloses the intra-private network handover, inter-private network handover, the handover between private and public network in col. 23, lines 6-15).



Regarding **claim 9**, Sayers has taught above in claim 2 the method for the same zone (inter-private network handover), and the packet generated by source gatekeeper P-BTS addressing to target gatekeeper P-BTS.

Regarding **claim 10**, Sayers has taught above in claim 3 the method for the handover to be effected to an external network, between private and public network ( col. 25, lines 44-67).

Referring to Sayers' base station controller BSC 16 in Fig. 1 and col.25, lines 47-48, for the external controller for interfacing to external network.

Regarding **claim 11**, Thomas has taught above in claim 6 the method for the packet generated by the source gatekeeper P-BTS is addressed to target gatekeeper having the identity of the target gatekeeper P-BTS.

Regarding **claim 12**, Sayers has taught above in claim 7 the method for source gatekeeper P-BTS 27 is an anchor gatekeeper, and all the handover request are routed though that anchor gatekeeper P-BTS.

Regarding **claim 13**, Sayers has taught above the method for the candidate list having the local area codes by using IP address his claim 11 above, and the cell identifiers (alias identifier, P-BTS identity, from Sayers.

Regarding **claim 14**, Sayers has taught above in claim 3 the handover, the external network handover above in between private and public network, and the gatekeeper, P-BTS, is arranged to receive a control message packet from an interface unit (BSC 16 in Fig. 1; gateway 42-1/42-G in Fig. 4, in Sayers) from external network. Besides, Thomas also teaches the call forwarding in between network domain 12 and network domain 10 for the roaming user to visited gatekeeper (Fig. 1, abstract).

*Response to Arguments*

4. Applicant's arguments filed 11/12/2003 have been fully considered but they are not persuasive.

Regarding applicant's argument based upon the argument for the no teachings for the gatekeeper connected to the gateway via switching path, the transmitting candidate list of the alternative cells to gatekeeper for handover, Thomas has taught above the gatekeeper is connected via packet switch to gateway, the gatekeeper 44 is connected to gateway 22-26 via switch router 34/28 respectively via the packet data network 30 (Fig. 1, col. 2, line 62 to col. 3, line 30). Wallentin has taught above the transmitting of candidate cell listing to gatekeeper for handover, the candidate list for handover (col. 3, lines 18-27), the list to target RNC 222 (col. 10, line 63 to col. 11, line 6, Fig.9). In view of above teachings, claims 1-14 are remaining in the rejected manner.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)-305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow C.C.

January 6, 2004.

  
EDWARD E. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600